3. (Once amended) A pharmaceutical composition according to Claim 1 [or 2], wherein said composition provides protective immunity to *Actinobacillus pleuropneumoniae* infection.

A1

4. (Once amended) A pharmaceutical composition according to Claim[s] 1 [or 2], wherein said composition provides protective immunity to infection from a gram negative bacterial species selected from the group consisting of *Pasteurellaceae; Neisseria; Haemophilus; Salmonella; and Escherichia.*

5. (Once amended) A pharmaceutical composition according to [any previous] claim 1, wherein the Cu,Zn-SOD is obtainable from a recombinant gene cloned from bacteria.

8. (Once amended) A vaccine according to Claim[s] 6 [or 7], wherein said vaccine provides protection against meningococcal infection.

A2

9. A method of preparing a pharmaceutical composition comprising:-

1) isolating a gene for a bacterial Cu,Zn-SOD of the dimeric type or a fragment, variant or derivative of the Cu,Zn-SOD, wherein antibodies raised against said fragment, variant or derivative also bind the full length intact Cu,Zn-SOD; and

A2

2) (a) synthesizing the Cu,Zn-SOD or fragment, variant or derivative from the gene; and combining said Cu,Zn-SOD, fragment, variant or derivative, with a pharmaceutically acceptable carrier, or

(b) combining said gene with a pharmaceutically acceptable carrier.

A3

13. (Once amended) A pharmaceutical preparation according to Claim 10 [or 11], wherein said composition provides protective immunity to infection from a gram negative bacterial species selected from the group consisting of *Pasteurellaceae; Neisseria; Haemophilus; Salmonella; and Escherichia.*

14. (Once amended) A pharmaceutical preparation according to [any of] Claim[s] 10 [to 13], wherein said antibody displays bactericidal activity.

15. (Once amended) A multivalent vaccine comprising a plurality of Cu,Zn-SODs of the dimeric type, or fragments, derivatives or variants thereof, wherein antibodies raised against said fragments, derivatives or variants also bind full length Cu,Zn-SOD, and wherein said plurality of Cu,Zn-SOD[S]s are from the same or different species of Gram negative bacteria.

16. (Once amended) A multivalent vaccine comprising a bacterial Cu,Zn-SOD of the dimeric type, or fragments, derivatives or variants [thereof] wherein antibodies

raised against said fragments, derivatives or variants also bind [intact] full length Cu,Zn-SOD[;], and a second protein that is not a Cu,Zn-SOD.

17. (Once amended) A multivalent vaccine according to Claim[s] 15 [or 16], wherein said vaccine provides protective immunity to meningococcal disease.

A3

18. (Once amended) [Use of] A method of treating an individual with a bacterial infection comprising administering a composition comprising a bacterial Cu,Zn-superoxide dismutase of the dimeric type, or a fragment, derivative or variant of the Cu,Zn-SOD, wherein antibodies raised against said fragment, variant or derivative also bind intact full length Cu,Zn-SOD [;in the manufacture of a medicament for treatment or prevention of bacterial infection].

19. (Once amended) [Use] A method according to Claim 18, wherein the bacterial infection is due to Gram negative species of bacteria.

20. (Once amended) [Use] A method according to Claim 18 [or 19], wherein the bacterial infection is due to meningococcal infection.

Please add the following claims:

--28. A method of treating an individual with a bacterial infection comprising administering a composition comprising an effective amount of an antibody specific to bacterial Cu,Zn-SOD of the dimeric type, or a fragment of said antibody.

A4

29. A method according to Claim 28 wherein the antibody is a monoclonal antibody.

30. A method of treating an individual with a bacterial infection comprising administering a composition comprising a nucleic acid encoding a bacterial Cu,Zn-superoxide dismutase of the dimeric type, or a fragment, derivative or variant of the Cu,Zn-SOD, wherein antibodies raised against said fragment, variant or derivative also bind intact full length Cu,Zn-SOD.

31. A method of treating or preventing bacterial infection comprising administering an effective amount of a bacterial Cu,Zn-SOD or fragment, variant or derivative of the Cu,Zn-SOD, wherein antibodies raised against said fragment, variant or derivative also bind intact full length Cu,Zn-SOD.

32. A method according to Claim 18, wherein said composition provides protective immunity to *Actinobacillus pleuropneumoniae* infection.